

NOTEBOOKS

INTRODUCTION

Buying a notebook is much trickier than buying a desktop PC. Not only do you have to worry about the price, but the size, weight and battery life all play an important role. With so many variables to worry about, choosing the right model can be daunting.

This month we've gathered together 15 notebooks from across the board. Three are budget models that start from as little as £494 including VAT. Six are powerful, general-purpose computers built with the latest components and cost less than £900. Six are small, lightweight ultra-portables that have been built for regular travellers so they won't strain your shoulders when you're running to catch that train or plane.

We put each notebook through our demanding benchmarks. We've measured how capable they are at running graphically detailed games and coping with tough Windows tasks, as well as how long their batteries last while you're out and about. Read on to find the notebook that best suits your needs.

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NOTEBOOK PRICE TEST 2008

There's a notebook PC for everyone in this month's Labs. Whether you want a budget model, a general-purpose PC or an ultra-portable, you'll find it right here

Choosing a... Notebook

There are core criteria to consider when buying a notebook, no matter how large your budget is.

However, some features will take priority over others depending on your needs, so it's important that you consider what you'll use your notebook for.

CONTROLLING INTEREST

A poor keyboard and touch pad can be both frustrating and uncomfortable to use. Keyboards should be well spaced, with keys that give just the right amount of feedback when pressed so they're not tiring to use for extended periods. Touch pads should be large and accurate, with firm and responsive buttons.

DISPLAYS OF AFFECTION

A good-quality display is essential, as you can't upgrade it. Screens should be bright, evenly lit and capable of displaying subtle shades of colour with little variation at different viewing angles. Most of the screens in this month's round-up have a glossy finish. These are great for watching movies as they make colours appear brighter and richer than their non-glossy counterparts. They reflect more light, though, which can be a problem in places with overhead lighting, such as offices. Only Toshiba's Tecra A9-51S and Fujitsu Siemens' Esprimo

Mobile U9200 have screens with an anti-glare finish that reduces such reflections.

All our budget and mid-range notebooks have either 15.4in or 17in widescreen displays. The 15.4in screens have resolutions of 1,280x800 pixels and the 17in models have 1,440x900 pixels. The exception is the 15.4in Lenovo 3000 N200, which has an even higher resolution of 1,680x1,050 pixels. The ultra-portable notebooks use either a 12.1in or 13.3in widescreen displays, but they all have resolutions of 1,280x800.

Higher-resolution widescreen displays feel more natural for working on expansive spreadsheets, editing panoramic photos and using programs with lots of windows, but text can be difficult to read if you have poor eyesight. This is especially true of Lenovo's 3000 N200, which has a high resolution that is more commonly found on 22in desktop displays.

VISTA VERSIONS

Most of this month's notebooks come with Windows Vista Home Premium or Vista Business. Home Premium includes Media Center for browsing your library of videos, photos and music. Vista Business lacks Media Center but can control other Windows PCs over your network, and comes with faxing and scanning software.



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The exceptions are PC Nextday's Zoostorm 4-5714 and Hi-Grade's Ultinote A9800R. The Zoostorm has Vista Ultimate installed, which has all the features of both Home Premium and Business. The Ultinote comes with Vista Home Basic, which lacks many of the features found in the other versions, such as the Aero 3D interface.

For more details on the differences between Vista versions, visit tinyurl.com/3843r3.

PERFORMANCE ART

All the notebooks in our group are capable of basic tasks, such as browsing the web. For more demanding jobs, the notebook's processor and the amount of RAM it has become more important. Memory-intensive tasks, such as editing photos and using several programs simultaneously, will benefit from more RAM.

Two of the budget notebooks have Intel Core Duo processors, as we'd expect in a low-cost computer. Surprisingly, the third, PC Nextday's Zoostorm 4-5628, uses a faster Core 2 Duo and outpaced some of the more expensive mid-range notebooks here. All three have 1GB of memory.

The mid-range and ultra-portable notebooks are evenly split between those that have 1GB of memory and those with 2GB. The more expensive the notebook, the more we'd expect it to have 2GB of RAM rather than 1GB. Almost all have Core 2 Duo processors, but MSI's ultra-portable PR210 is the only notebook in our group

to use an AMD processor instead of an Intel one. With a Turion 64 X2 TL-56 and only 1GB of RAM, it was one of the slowest notebooks in our Windows benchmarks.

As the results of our Call of Duty 2 test on page 91 show, none of the notebooks is good enough for playing games in high detail. Some notebooks manage at lower detail settings, and our reviews let you know which can do this. An integrated graphics chip shares system RAM, leaving less memory for your programs and Windows. A dedicated graphics chip uses its own memory and may be preferable if you frequently use memory-hungry applications.

MOBILE HOMES

If your notebook will spend most of its time in your home or office, its weight and battery life don't really matter. But if you travel frequently, a short battery life and hefty frame will turn your high-tech notebook into a useless burden.

Generally, the larger the notebook's screen, the heavier it will be. Of our budget and mid-range notebooks, the 15.4in models weigh between 2.5kg and 3kg while the 17in models weigh between 3kg and 4kg. The 12.1 and 13.3in ultra-portables are lighter at around 2kg.

We'd expect a battery life of around two-and-a-half hours for a budget or mid-range notebook. All three budget notebooks met or exceeded this, but in the mid-range group only Toshiba's Tecra

and Samsung's R70 managed this. For an ultra-portable notebook, we'd expect a battery life of at least three hours. Only Samsung's Q70, MSI's PR210 and Dell's XPS M1330 exceeded this.

All new notebooks should have wireless networking built-in. A few can also connect to networks using the faster but still preliminary 802.11n standard. Fujitsu Siemens' Esprimo and Dell's XPS M1330 can also connect to the internet using HSDPA mobile phone networks if you add an appropriate SIM card.

ROOM TO SPARE

Most of the notebooks reviewed have 120GB or 160GB hard disks, which will provide enough space for office documents and modest media collections. Large music and movie libraries would benefit from the spacious 250GB disk in PC Nextday's Zoostorm 4-5714, but would need pruning to fit on the Tecra's cramped 80GB disk.

All the notebooks here have expansion slots for adding peripherals such as TV tuners. Most have an ExpressCard/54 slot, while the Esprimo Mobile has the smaller ExpressCard/34 slot. ExpressCard/54 slots are more flexible as they can accept both ExpressCard sizes.

A few notebooks have the older CardBus slot. CardBus is slowly being phased out in favour of ExpressCard but there are still plenty of CardBus devices available. Acer's TravelMate 7720G has both CardBus and ExpressCard/54 slots.



HI-GRADE Ultinote A9800R

★★★★

£499 inc VAT
From www.higrade.com

Hi-Grade's Ultinote A9800R has the largest screen in this category. Sadly, only Windows Vista Home Basic is installed.

FEATURES

The Ultinote's glossy 17in screen has a 1,440x900 resolution, which is the highest in this category. Not surprisingly, it's the clearest and best-looking display here. Colours were accurate with no speckling, and the screen was evenly lit. Our greyscale test revealed some banding, so it's not suitable for precise image editing, but it won't be a problem for touching up your holiday photos. The widescreen display is perfect for watching movies, and the A9800R has both D-sub and S-video outputs for connecting external displays. You'll have to watch films with PowerDVD, though, as the Windows Vista Home Basic operating system lacks the excellent Windows Media Center.

Like the screen and the chassis, the keyboard is very sturdy. It doesn't flex when pressed, and the keys are responsive but they need quite a bit of pressure. The touch pad is very responsive, as are its buttons, although they are slightly clunky and noisy. This is the only notebook in the category that has a FireWire port for digital video cameras.

PERFORMANCE

The A9800R's Core Duo T2080 is the slowest processor in this group, and it showed: this notebook scored the lowest overall in our 2D benchmarks. The integrated graphics failed our Call of Duty 2 benchmark, so it's unsuitable for playing games. The battery, however, lasted an impressive three hours and 53 minutes, which was the longest in this category by far.

VERDICT

The A9800R is heavy, but it has a long battery life and the best display in this group. However, we'd sacrifice the screen for Windows Vista Home Premium. PCNextday's Zoostorm 4-5628 has a better balance of components, and is comfortably a better performer.

SUMMARY

- ✓ Excellent battery life
- ✓ Large high-resolution screen
- ✗ Windows Vista Home Basic; 3D performance

GENERAL-PURPOSE NOTEBOOK Intel Core Duo T2080, 1GB RAM, 120GB disk, Intel GMA950 graphics, DVD+/-RW +/-DL, 17in widescreen LCD, 3.8kg
PART CODE Ultinote A9800R
DETAILS www.higrade.com



PC NEXTDAY Zoostorm 4-5628

★★★★★

£569 inc VAT
From www.pcnextday.co.uk



PC Nextday's Zoostorm 4-5628 has the only Core 2 Duo processor in this category and the best performance, but it's also the most expensive.

FEATURES

This 15.4in widescreen notebook has a glossy display with a native resolution of 1,280x800. The screen's image quality is high and it's evenly lit. The display is sturdy and barely flexes under pressure. This level of build quality extends to the rest of the notebook and, although its chassis is uninteresting to look at, it is very robust. The keyboard doesn't flex when pressed, but the keys could provide more feedback. We found that typing became tiring.

The Vista Home Premium operating system includes Windows Media Center for organising your photos and watching movies, and there's a DVI output for connecting a monitor.

PERFORMANCE

The Zoostorm 4-5628 is the only notebook in this category to have a Core 2 Duo processor. The 2.0GHz T7250 proved very quick, and this notebook easily outperformed the others in this category. The Nvidia GeForce 8600M GS graphics wouldn't run our Call of Duty 2 test at first and we had to download the latest drivers from Nvidia's website. With these installed it ran the benchmark at 16.3fps, which is too slow for smooth gameplay. However, turn down the detail settings and resolution and you'll get playable frame rates.

Battery life lags behind that of the Hi-Grade Ultinote A9800R's, but two hours and 40 minutes isn't bad, and is good enough for the occasional traveller or use in the garden.

VERDICT

The Zoostorm 4-5628 costs more than the other two budget notebooks, but it's money well spent. It has the best 2D performance, it can cope with the odd game and its battery life isn't bad. If you need a general-purpose PC and don't spend all day typing, it's a great choice.

SUMMARY

- ✓ Decent performance
- ✓ Good battery life
- ✗ Poor keyboard for typing long documents

GENERAL-PURPOSE NOTEBOOK Intel Core 2 Duo T7250, 1GB RAM, 120GB disk, Nvidia GeForce 8600M GS graphics, DVD+/-RW +/-DL, 15.4in widescreen LCD, 2.9kg
PART CODE 3384-5628
DETAILS www.pcnextday.co.uk



SAMSUNG R60

★★★★★

£494 inc VAT
From www.pcwb.com

The cheapest of the three notebooks here, Samsung's R60 is arguably the most stylish.

FEATURES

The R60 is a 15.4in widescreen notebook with a decent glossy display that has a resolution of 1,280x800. Images are vivid, and although colours are marginally lighter at the bottom of the screen, it's not distracting. Our greyscale test showed minimal banding, making it suitable for photo editing. Both the screen and chassis are sturdy, and barely flex under pressure.

The keyboard is decent and barely flexes while typing. The keys give plenty of feedback, which also makes typing comfortable. The touch pad is accurate and produces smooth movement across the screen, although the buttons feel a little cheap and clunky.

The R60 comes with Windows Vista Home Premium, so you can use Windows Media Center to listen to music, play slideshows and watch movies. The R60's 160GB hard disk is the largest in this group.

PERFORMANCE

The R60's Core Duo T2450 runs at the same clock speed as the Zoostorm's Core 2 Duo processor, but performance is a fraction slower. It's still quick, though, and gave us a very good score of 210 in our video-encoding test. The ATI Radeon Xpress 1250 graphics ran Call of Duty 2 at just 4.5fps, which means it's not suitable for modern 3D games.

The R60 has the lowest battery life in the category, but two hours and 34 minutes is still a reasonable amount of time from a charge.

VERDICT

Samsung's R60 performs well and is a pleasure to use. The screen looks good and the keyboard and touch pad are very responsive. It also has a large hard disk for the price. If you want style and ease of use, and processing speed isn't your main concern, the R60 is a good buy, but PC Nextday's Zoostorm is a better all-rounder.

SUMMARY

- ✓ Large hard disk
- ✓ Decent performance and battery life
- ✗ Poor 3D performance

GENERAL-PURPOSE NOTEBOOK Intel Core Duo T7450, 1GB RAM, 160GB disk, ATI Radeon Xpress 1250 graphics, DVD+/-RW +/-DL, 15.4in widescreen LCD, 2.7kg
PART CODE NP-R60F002/SUK
DETAILS www.samsung.com/uk



ACER TravelMate 7720

★★★★★

£730 inc VAT

From www.laptopsdirect.co.uk

Acer's TravelMate 7720G has a high-quality keyboard, but its weight and battery life mean it's not ideal for carrying around.

FEATURES

The TravelMate 7720G is the heaviest notebook in this category at 3.5kg, so it's not the best travelling companion. It has a glossy 17in widescreen display with a native resolution of 1,440x900. Picture quality is excellent, although the bottom of the screen is marginally lighter than the rest. The display is sturdy and the chassis is similarly robust.

The 7720G has a very tough keyboard that doesn't flex as you type. The keys are large and feel luxurious and very responsive. The notebook's size means that Acer has managed to fit in a full-size numerical keypad. The touch pad is responsive and accurate, but the buttons feel clunky and cheap. The 7720G has DVI, D-sub and S-video outputs, so you have three options for connecting to an external monitor.

PERFORMANCE

The 7720G came third in all our application benchmarks in this category, thanks to its powerful 2GHz Core 2 Duo T7300 processor. In the battery tests it fared less well, lasting for less than two hours. Sound quality from the built-in speakers is decent enough. They're slightly tinny and lack bass, but they'll do for watching the occasional film or playing games.

The 7720G's Radeon HD 2400XT graphics managed 9.9fps in our Call of Duty test, but reducing detail settings should result in a playable frame rate.

VERDICT

The 3.5kg TravelMate 7720G isn't ideal for carrying around, and the battery won't last long anyway. It's £70 cheaper than its nearest rival, the Eclipse, but that extra money buys faster performance. It has a good keyboard, though, so if you type a lot and need a desktop replacement notebook, this is a great choice.

SUMMARY

- ✓ Good keyboard
- ✓ Numeric keypad
- ✗ Poor battery life

DESKTOP-REPLACEMENT NOTEBOOK Intel Core 2 Duo T7300, 2GB RAM, 160GB disk, ATI Mobility Radeon HD2400 XT graphics, DVD+/-RW +/-DL, 17in widescreen LCD, 3.5kg
PART CODE LX.TMROX.072
DETAILS www.acer.co.uk



ECLIPSE Titan i77vsta

★★★★★

£800 inc VAT

From www.eclipse-computers.com

Eclipse's Titan i77vsta is a very powerful notebook with surprisingly good battery life, an HDMI output and a great price.

FEATURES

The Titan i77vsta is a 17in widescreen notebook with a glossy 1,440x900 display. The display looks good and is evenly lit. Colours are accurate, and we found only minimal banding in our greyscale tests. It's sturdy, with no flex to the screen or chassis when you apply pressure. The keyboard isn't as luxurious as the Acer's, but the keys are a good size, well spaced and feel comfortable to use, and the keyboard won't flex as you type. The touch pad and buttons are accurate and the buttons sit flush with the chassis so you don't accidentally press them when scrolling. There's a numerical keypad, but it's not as good as the keyboard.

The notebook has DVI and HDMI connections, so you can easily connect it to your HD TV or LCD monitor. There's also an ample 160GB hard disk.

PERFORMANCE

The i77vsta achieved excellent results in our benchmarks, and excelled at video encoding. Overall its performance was slightly behind that of PC Nextday's notebook, but the results were close.

The speakers produce the best sound in this group, but they're quiet. The i77vsta's GeForce 8600M GS graphics managed just 13.7fps in our Call of Duty test, but turning down detail settings should result in playable rates.

VERDICT

While PC Nextday's notebook beat the Eclipse in most of our benchmarks, the Titan i77vsta's lower cost and better battery life made all the difference. It makes a good compromise between performance and battery life. At 3.12kg, it's not easy to carry around all day, but it makes an excellent desktop replacement notebook for use at home.

SUMMARY

- ✓ Excellent performance
- ✓ HDMI output; numeric keypad
- ✗ Quiet speakers

DESKTOP-REPLACEMENT NOTEBOOK Intel Core 2 Duo T7700, 2GB RAM, 160GB disk, Nvidia GeForce 8600M GS graphics, DVD+/-RW DL, 17in widescreen LCD, 3.1kg
PART CODE Titan i77vsta
DETAILS www.eclipse-computers.com



LENOVO 3000 N200

★★★★★

£718 inc VAT

From www.lambda-tek.com

Lenovo's 3000 N200 has a high-resolution display and feels great to use, but it's over-priced for its performance.

FEATURES

At 1,680x1,050, the 3000 N200's display has the highest resolution here. The 15.4in glossy display is impressive and produces a very clean and crisp-looking image. We couldn't fault the backlighting, which lights the whole screen evenly. Our greyscale test revealed a beautifully smooth transition from black to white. This would be a great screen for precise image editing and is clearly the best display in this group. There's an S-video output for connecting to an external display.

The screen and the chassis are both robust and the keyboard doesn't flex as you type. The keys are also very responsive, although they clicked louder than we're used to when we typed. The touch pad buttons are our favourite in this group, as they're so responsive.

PERFORMANCE

The 3000 N200's Core 2 Duo T7300 processor is pretty powerful, but with only 1GB of RAM this notebook performed worse than others in the group with the same processor. Battery life was reasonable at two hours and 15 minutes, which was the third best result in this category.

The sound quality is fair, and the speakers produce a decent amount of volume. They do a good job for notebook speakers, although when you're at home you'll probably want to use a dedicated set. The 3000 N200's GeForce Go 7300 graphics failed our Call of Duty 2 test, making it unsuitable for modern 3D gaming.

VERDICT

Lenovo's 3000 N200 feels great to use, but performs poorly. The display is excellent, but this alone can't make this notebook a Best Buy. Although £82 more expensive, Eclipse's Titan i77vsta is much better value, with better all-round performance. It's the better choice if you don't need the high-resolution screen.

SUMMARY

- ✓ High-resolution display
- ✗ Only 1GB of RAM
- ✗ Poor games performance

GENERAL-PURPOSE NOTEBOOK Intel Core 2 Duo T7300, 1GB RAM, 120GB disk, Nvidia GeForce Go 7300 graphics, DVD+/-RW +/-DL, 15.4in widescreen LCD, 2.8kg
PART CODE TY2B2UK
DETAILS www.lenovo.co.uk



PC NEXTDAY Zoostorm 4-5714 Advanced Ultimate Laptop

★★★★★

£866 inc VAT

From www.pcnextday.co.uk

The Zoostorm 4-5714 has an almost identical chassis and spec to Eclipse's Titan i77vsta and performs similarly, but it has a larger hard disk and Windows Vista Ultimate installed.

FEATURES

After Acer's excellent keyboard, the Zoostorm's keys feel a little clunky and unresponsive, although they are a good size and well spaced. The touch pad is decent, with responsive buttons. Like Acer's notebook, it also has a numerical keypad. The chassis is well made and robust, with little flex in the screen or base.

The 17in display has a 1,440x900 resolution and vibrant colours. The backlight is even and our greyscale tests revealed minimal banding, although nothing that would ruin your enjoyment of movies and photos.

This is the only notebook here to provide Windows Vista Ultimate, which has all the features of the Business and Home Premium editions. It's expensive, though, and we'd rather pay less and get Vista Home Premium. The Zoostorm's 250GB hard disk is larger than the Eclipse's, but they have the same Intel Core 2 Duo T7700 processor, 2GB RAM and Nvidia GeForce 8600M GS graphics card.

PERFORMANCE

The 4-5714 has the worst battery life in the group, and takes two hours and 40 minutes to charge – an hour longer than the battery lasts. As with the Eclipse, the speakers sound decent but are quiet. Its GeForce 8600M GS graphics managed 13.4fps in Call of Duty 2, but reducing detail will get playable frame rates.

VERDICT

PC Nextday's Zoomstorm 4-5714 had the best 2D benchmark scores here, but poor battery life. As a desktop replacement it's a good buy, but Eclipse's notebook is better value.

SUMMARY

- ✓ Excellent performance; large hard disk
- ✓ HDMI output; numeric keypad
- ✗ Poor battery life; quiet speakers

DESKTOP-REPLACEMENT NOTEBOOK Intel Core 2 Duo T7700, 2GB RAM, 250GB disk, Nvidia GeForce 8600M GS graphics, DVD+/-RW DL, 17in widescreen LCD, 3.1kg
PART CODE 3384-5714
DETAILS www.pcnextday.co.uk



SAMSUNG R70

★★★★★

£730 inc VAT

From www.laptopsdirect.co.uk

We reviewed the R70 in *Shopper*, September 2007 and gave it a Best Buy award. Here we see how it compares with the latest notebooks.

FEATURES

The R70 has a similar chassis to Samsung's R60 (see page 80). While this means the same sleek, stylish look and robust chassis, it also has the same clunky touch-pad buttons. The keyboard is decent, with responsive keys and no flexing as you type, and the touch pad is accurate. The 15.4in, 1,280x800-resolution screen is also well made and sturdy. Picture quality is decent, colours are accurate and the screen is evenly lit. Our greyscale tests showed minimal banding that won't stop you editing holiday photos or watching DVDs. There's an HDMI output for connecting the R70 to an HD TV, which is a good feature at this price.

At 2.64kg, the R70 is the lightest notebook in this category. You wouldn't want to carry it all day, but it's light enough for short trips.

PERFORMANCE

The R70's onboard GeForce 8400M GS graphics scored just 10.8fps in our Call of Duty 2 benchmark, but reduce the detail settings and you can get a playable frame rate for the occasional gaming session. With just 1GB of RAM it failed to keep up with the heady speeds of the frontrunners in this group in our benchmarks. It has a decent battery life of two hours and 41 minutes in light use. Sound quality from the speakers is decent, and they have enough volume to hear them clearly.

VERDICT

The R70 looks classy and stylish, but it won't last as long as Toshiba's notebook or perform as well as the Eclipse, Zoostorm or Acer notebooks. Against such tough competition, the R70 is no longer our Best Buy, and receives only four stars. Even so, it's a very light notebook, so if you need a 15.4in screen and spend a lot of time on the move, it's a good choice.

SUMMARY

- ✓ Decent battery life
- ✓ Good keyboard and touch pad; HDMI output
- ✗ Only 1GB of RAM

GENERAL-PURPOSE NOTEBOOK Intel Core 2 Duo T7100, 1GB RAM, 120GB disk, Nvidia GeForce 8400M GS graphics, DVD+/-RW +/-DL, 15.4in widescreen LCD, 2.6kg
PART CODE NP-R70T001/SUK
DETAILS www.samsung.com/uk



TOSHIBA Tecra A9-51S

★★★★★

£652 inc VAT

From www.pcwb.com

Toshiba's Tecra A9-51S is the only notebook in this category to have a matt screen with an anti-glare finish, so it's suitable for outdoor use.

FEATURES

The Tecra A9-51S has the lowest price in this category. Its 15.4in anti-glare screen has a resolution of 1,280x800 and produces excellent picture quality. It is also well built: the chassis has a stylish silver finish and both it and the display feel very robust. The keyboard is decent, and there's no flex as you press the keys. The touch pad is less responsive, and there's a slight but noticeable delay between moving your hand and the cursor responding, which can be off-putting. There's also a touch stick on the keyboard, which works well.

While the other notebooks in this category have either S-video or HDMI outputs, the A9-51S offers only D-sub for connecting it to an external screen. We were also disappointed to see only an 80GB hard disk; Samsung's R70 has an HDMI output and a far more generous 120GB hard disk.

PERFORMANCE

The battery lasted an impressive three hours and 13 minutes in our tests, which is nearly twice as long as PC Nextday's Zoostorm, and the best in this category. The built-in speakers, however, are the worst. They sound tinny, with no stereo separation, and while they're capable of high volumes, they distort when loud.

With only 1GB of RAM and a 1.8GHz Core 2 Duo T7100 processor, the A9-51S couldn't compete with the Eclipse, PC Nextday and Acer notebooks in our benchmark tests. As expected, the onboard graphics couldn't run our Call of Duty 2 test, so this isn't a notebook for anyone thinking about gaming.

VERDICT

The Tecra A9-51S is a very stylish notebook with a decent battery life. However, when it comes to performance, it can't compete with the Eclipse and PC Nextday notebooks.

SUMMARY

- ✓ Excellent battery life
- ✓ Anti-glare screen
- ✗ Small hard disk; only 1GB of RAM

GENERAL PURPOSE NOTEBOOK Intel Core 2 Duo T7100, 1GB RAM, 80GB disk, Intel GMA3100 graphics, DVD+/-RW +/-DL, 15.4in widescreen LCD, 2.9kg
PART CODE PT552E-01D00YEN
DETAILS <http://uk.computers.toshiba-europe.com>



DELL XPS M1330



£1,279 inc VAT
From Dell 0870 353 3277



Dell's XPS M1330 not only looks stylish, it has excellent battery life, too. It's also one of the lightest notebooks in this test.

FEATURES

The M1330's striking red lid has a pleasant rubbery texture, but while distinctive, it doesn't match the black and silver chassis. Fortunately, it is also available in black. The responsive keyboard makes full use of the available space and is very comfortable to use. The touch pad is small but accurate, although the buttons lack feedback. Two headphone sockets under the touch pad enable two people to watch a film without disturbing others. There's no built-in modem, but the ability to connect to an HSDPA network partially compensates for this.

Colours look rich on the glossy 13.3in display. White areas are reasonably clean and evenly lit, while our greyscale and colour transition tests were fairly smooth. Images looked grainy, though. The display is one of the first we've seen with an LED backlight so it achieves full brightness almost instantly when waking from sleep. It's not perfect, but it's one of the better displays in this group.

PERFORMANCE

The M1330 wasn't the fastest ultra-portable here, but it wasn't far behind in most of our tests. Its dedicated Nvidia graphics chip doesn't share system memory, but it's no better at playing the latest 3D games than the notebooks here with integrated graphics.

We were particularly impressed with the M1330's battery life. Its slim six-cell battery lasted almost four hours. With its chunkier optional nine-cell battery, it ran for almost six hours, one of the longest times we've seen.

VERDICT

Although pricier than the other ultra-portables, Dell's XPS M1330 has excellent battery life, a comfortable keyboard and good Windows performance. It's perfect for life on the road.

SUMMARY

- ☒ Excellent battery life
- ☒ Excellent 2D performance
- ☒ No modem

ULTRA-PORTABLE NOTEBOOK Intel Core 2 Duo T7300, 2GB RAM, 160GB disk, Nvidia GeForce 8400M GS graphics, DVD+/-RW +/-DL, 13.3in widescreen LCD, 2.0kg
PART CODE NPUK5-N11X3306
DETAILS www.dell.co.uk



FUJITSU SIEMENS Esprimo Mobile U9200



£1,053 inc VAT
From www.fujitsu-siemens-shop.co.uk

Fujitsu Siemens' Esprimo Mobile notebook feels well built and is fast in Windows but it suffers from a poor keyboard and screen.

FEATURES

The Esprimo's grey chassis may lack style, but it's very sturdy. Unfortunately, the keyboard feels cramped and certain keys, including the Shift and arrow keys, are too small for comfort. The touch pad is small but accurate and has a pleasingly smooth texture, but its buttons are so stiff as to be almost unusable.

The 120GB hard disk is plenty for office documents, but we'd prefer a larger disk at this price. Like Dell's XPS M1330, the Esprimo supports HSDPA mobile broadband if you supply a SIM card. The ExpressCard/34 slot limits your choice of cards compared with a larger ExpressCard/54 slot, but peripherals such as TV tuners are widely available.

Unlike the other ultra-portables here, the Esprimo has an anti-glare display. Colours are bright and our greyscale and colour transitions were smooth. The backlight is a little uneven at the bottom of the display, though. White areas looked grey and images were grainy.

PERFORMANCE

The Esprimo's 2.2GHz T7500 is the fastest processor in this category. It got the third fastest overall score in our 2D benchmarks, but its integrated graphics are no good for games.

This notebook lasted just two hours and 38 minutes in our battery test. This would be fine for a budget notebook but is unimpressive for an ultra-portable costing more than £1,000.

VERDICT

We were impressed with the Esprimo Mobile's speedy Windows performance and tank-like build quality. But its cramped keyboard, below-average battery life and grainy screen make it poor value compared to Dell's XPS M1330.

SUMMARY

- ☒ Excellent 2D performance; sturdy
- ☒ Grainy display
- ☒ Poor battery life

ULTRA-PORTABLE NOTEBOOK Intel Core 2 Duo T7500, 2GB RAM, 120GB disk, Intel Graphics Media Accelerator X3100 graphics, DVD+/-RW +/-DL, 12.1in widescreen LCD, 2.0kg
PART CODE LKN:GBR-230100-0012
DETAILS www.fujitsu-siemens.co.uk



LENOVO 3000 V200 076432G



£829 inc VAT
From www.morecomputers.co.uk

The 3000 V200 is well built and keenly priced, but has poor battery life and just 1GB of RAM.

FEATURES

Lenovo's 3000 V200 feels sturdy, but not quite as well built as Lenovo's better-known ThinkPad range, and flexes slightly around the lid. The keyboard is just as responsive and comfortable to type on as those on ThinkPad notebooks, though. The touch pad is accurate and well sized, but its buttons lack feedback.

The 12.1in screen has a glossy finish but isn't particularly bright. Colours looked washed out and white areas had a greyish tint. Our greyscale test looked smooth but there was banding in our colour transitions test. Colour accuracy suffered when viewed off-centre.

The V200 is one of only three notebooks in this group to support 802.11n WiFi, but a hard disk larger than the 120GB model supplied would have been more useful. Apart from MSI's PR210, the V200 is the only ultra-portable here with a fingerprint reader.

PERFORMANCE

The V200 has a fast 2GHz Core 2 Duo T7300 processor but only 1GB of RAM. While this is enough for everyday office tasks, it fell behind in jobs that benefit from lots of memory such as editing photos. As a result, it was the slowest Core 2 Duo ultra-portable in our benchmarks with an overall score of 151.

We were not surprised that the V200's integrated graphics chip couldn't cope with the latest 3D games. We were more startled by the V200's poor battery life. It had the shortest life of any ultra-portable in our light usage test, lasting only one hour and 45 minutes.

VERDICT

The V200 is fairly inexpensive. We liked its sturdy build, but with a short battery life and not much RAM, we can't recommend it.

SUMMARY

- ☒ Firm chassis and keyboard; inexpensive
- ☒ Poor battery life
- ☒ Only 1GB of RAM

ULTRA-PORTABLE NOTEBOOK Intel Core 2 Duo T7300, 1GB RAM, 120GB disk, Intel Graphics Media Accelerator X3100 graphics, DVD+/-RW +/-DL, 12.1in widescreen LCD, 1.8kg
PART CODE FT132UK
DETAILS www.lenovo.co.uk



MSI PR210



£701 inc VAT
From www.ebuyer.com



MSI's PR210 may be the cheapest ultra-portable notebook in this month's group, but it's still one of the most desirable.

FEATURES

Although the MSI PR210 is cheap at just over £700, it has features not found on some of its pricier competitors, including an HDMI port and fingerprint reader. However, it lacks a FireWire port for connecting a DV camera.

The keyboard is comfortable to use, but the keys don't feel as responsive as those on Dell's XPS M1330. The slightly non-standard layout, with narrow arrow keys, could trip-up touch typists. The battery props up the keyboard at an angle, which can make typing more comfortable. The touch pad is large and accurate, although the buttons feel slippery.

We were disappointed by the quality of the glossy 12.1in display. Colours looked bright and our greyscale transition test was fairly smooth, but white areas had a blueish cast. The backlighting was uneven towards the bottom of the screen and there was some banding in our colour gradient test.

PERFORMANCE

We didn't expect the PR210 to match the performance of the more expensive ultra-portables here, but we were still disappointed. It was the slowest ultra-portable in all our Windows benchmarks, thanks to its slow AMD Turion 64 X2 processor and only 1GB of RAM. Like the other ultra-portables, it's not capable of playing the latest 3D games.

The PR210 did far better in our light usage battery test. It lasted just over four-and-a-half hours. Only the XPS M1330's optional nine-cell battery lasted longer.

VERDICT

The PR210 isn't for everyone due to its sluggish Windows performance, but if you just need a notebook with long battery life for everyday office tasks, it is a bargain.

SUMMARY

- ☒ Inexpensive
- ☒ Excellent battery life
- ☒ Poor performance; only 1GB of RAM

ULTRA-PORTABLE NOTEBOOK AMD Turion 64 X2 TL-56, 1GB RAM, 160GB disk, ATI Radeon Xpress 1270 graphics, DVD+/-RW +/-DL, 12.1in widescreen LCD, 2.0kg
PART CODE PR210-016UK
DETAILS www.msicomputer.co.uk



ROCK Pegasus P335-T74



£1,023 inc VAT
From www.rockdirect.com

Rock's Pegasus has a fast processor but it isn't very good value.

FEATURES

We've seen the Pegasus's chassis before but this isn't a bad thing as it feels sturdy. The keys don't have as much travel as the XPS M1330's, but the keyboard is comfortable to type on. Unfortunately, it's too easy to brush the touch pad accidentally while typing. This is annoying as the small, oversensitive pad often starts scrolling your current window rather than simply moving the cursor. The buttons feel stiff and hard to press, which can be tiring.

Colours looked rich and bright on the glossy 13.3in widescreen display, although white areas looked greyish. It's not ideal for image editing due to banding and speckling in our greyscale and colour transitions tests, as well as shifts in colour accuracy from small changes in viewing angles.

PERFORMANCE

Although the Pegasus has only 1GB of RAM, it held its own against notebooks with twice as much memory in our performance benchmarks thanks to its powerful T7400 Core 2 Duo processor. This notebook had the second highest overall score of 173, but it would have performed even better with 2GB of memory, which we'd expect at this price.

The Pegasus managed less than two hours in our light-usage battery test, which was the second shortest time for an ultra-portable in this group. Not surprisingly, it couldn't run our Call of Duty 2 test, so you can't play the latest games on it.

VERDICT

We were disappointed by the Pegasus's short battery life and twitchy touch pad. These may have been forgivable in a cheaper notebook, but at just over £1,000, the Pegasus is overpriced compared with more capable ultra-portable notebooks, such as Dell's XPS M1330.

SUMMARY

- ☒ Excellent performance; sturdy
- ☒ Poor battery life
- ☒ Only 1GB of RAM

ULTRA-PORTABLE NOTEBOOK Intel Core 2 Duo T7400, 1GB RAM, 160GB disk, Intel Graphics Media Accelerator 950 graphics, DVD+/-RW +/-DL, 13.3in widescreen LCD, 2.1kg
PART CODE P335-T74
DETAILS www.rockdirect.com



SAMSUNG Q70



£817 inc VAT
From www.laptopsdirect.co.uk

Samsung's Q70 is attractive and fairly inexpensive, but is outclassed by other ultra-portables in this group.

FEATURES

Samsung's Q70 is one of the more stylish notebooks in this group thanks to its glossy black lid and metallic palm rest. It doesn't feel as sturdy as Lenovo's or Rock's ultra-portables, though, due to its creaky plastic construction.

We were more impressed with the firm, responsive keyboard, which is a pleasure to use. The arrow keys are rather small and there's no Windows key to the left of the space bar, but the large, accurate touch pad feels smooth and the buttons give just enough feedback.

The 13.3in glossy display is a mixed bag. White areas looked grey and there was some noticeable banding in our colour transitions test, but otherwise colours were bright and our greyscale test was produced smoothly.

PERFORMANCE

Like Dell's XPS M1330, the Q70 has a Core 2 Duo T7300 processor and 2GB of RAM. The Q70 scored 162 overall in our benchmarks so it can handle tough computing tasks, but the Espresso Mobile has the advantage with its faster processor. As with the other ultra-portables on test, the Q70's graphics chip isn't powerful enough to play the latest games, but it should be able to cope with older titles.

The Q70 managed just over three hours in our light usage test. While this is longer than many of the other ultra-portables in this group, it can't match the standards set by MSI's PR210 and Dell's XPS M1330.

VERDICT

Samsung's Q70 has the best keyboard and touch pad of any ultra-portable in this group. It's fast in Windows and is the second-cheapest ultra-portable here. MSI's cheaper PR210 has a better battery life, though, and Dell's XPS M1330 is a better all-rounder with great performance.

SUMMARY

- ☒ Inexpensive
- ☒ Decent battery life
- ☒ Creaky plastic construction

ULTRA-PORTABLE NOTEBOOK Intel Core 2 Duo T7300, 2GB RAM, 160GB disk, Nvidia GeForce 8400M G graphics, DVD+/-RW +/-DL, 13.3in widescreen LCD, 2.0kg
PART CODE NP-Q70AV02/SUK
DETAILS www.samsung.co.uk

BENCHMARKS



Budget



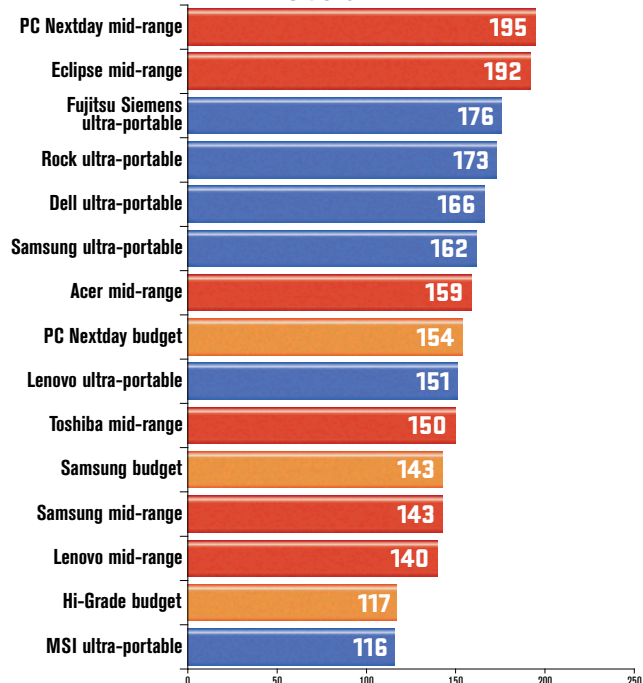
Mid-range



Ultra-portable

2D performance Shopper application tests

Overall



Video-encoding

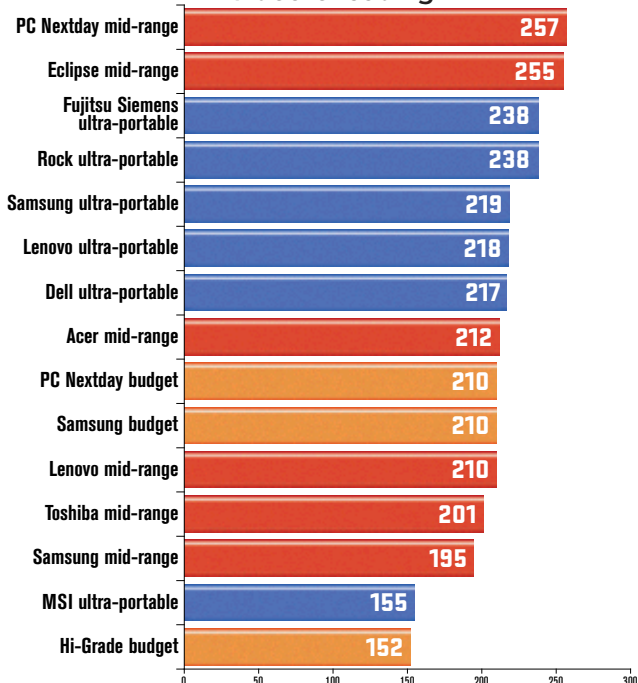
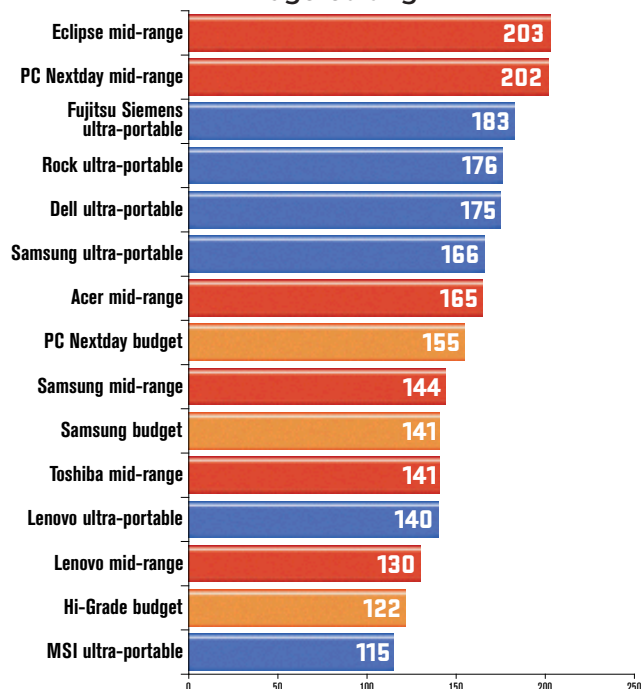
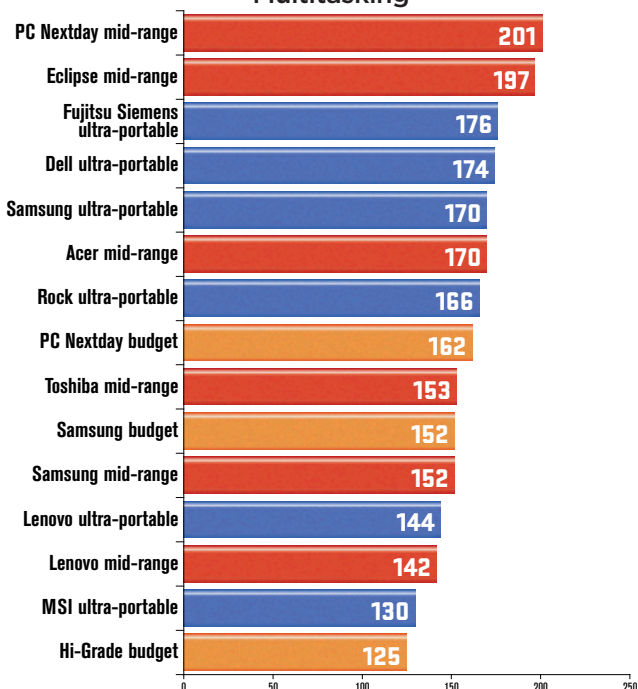


Image-editing



Multitasking



Computer Shopper's 2D benchmarks are designed to show how PCs stand up to the toughest tasks Windows can throw at them. Today's PCs have no problem running office applications such as Word and Excel, so we have chosen to focus our tests on areas where you could experience difficulties.

In the new version, there are four scripts. Encoding a short video to MPEG2 format is an extremely processor-intensive task that anyone interested in transferring home videos to DVD will have to tackle. Our image-editing test

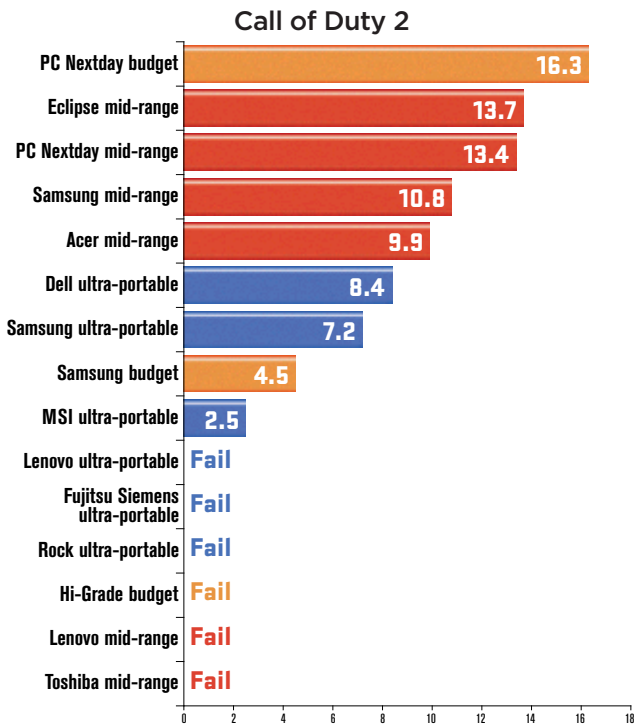
simulates a session of photo enhancement using Paint Shop Pro X, which culminates in the composition of a panorama from a set of digital snaps. In our third test, a set of audio files is ripped to MP3 format. Finally, we have a multitasking test designed to gauge the real-life benefits of Hyper-Threaded and dual-core processors. This test compresses a DVD for playback on a Pocket PC at the same time as running our image-editing test.

Figures are relative to a reference Evesham Athlon 64 3500+, which scores 100 in all tests.



SETTINGS We run our application tests at the notebook's native resolution in 32-bit colour
WEB www.computershopper.co.uk

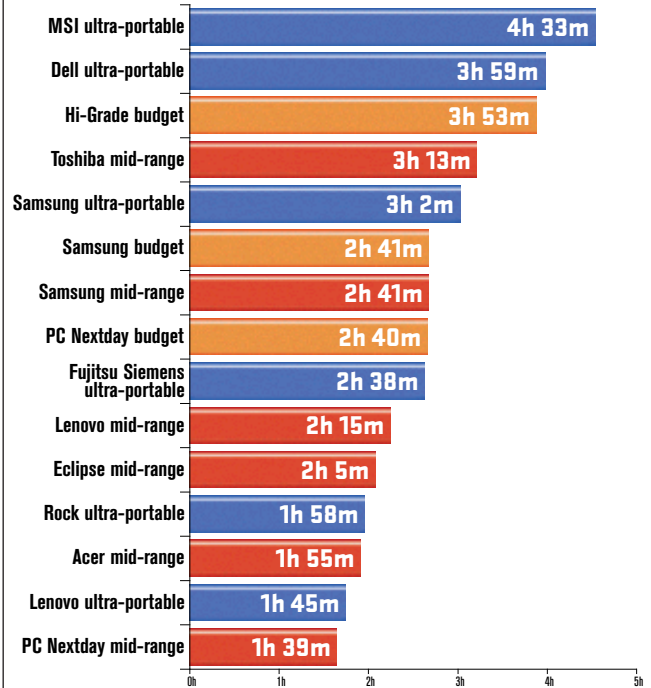
3D performance Call of Duty 2



SETTINGS 1,024x768 resolution, high quality, 4x AA WEB www.doom3.com

Our Doom 3 benchmark tests whether a PC has the power needed to play modern 3D games with ease.

Battery life Run time



Our battery test involves light browser use with the display at its middle brightness setting.

How we test Notebooks

As well as running our suite of 2D and 3D benchmarks, we put each notebook through a number of demanding quality tests.

The display is one of the most important components of a notebook, so we put each one thoroughly through its paces. First we put full-screen white and black images on the display. These allow us to check that the backlighting is even and to determine whether there are any undesirable coloured tints. We also use test cards with graduated transitions of colours and greys. These show us which screens are best at recreating the subtle transitions between shades of grey and colours.

Finally, we look at some high-definition video clips and photos on the screen. The video clips show how each display performs when showing a moving image. We perform all the tests simultaneously on each notebook, with all the computers sitting side by side. This allows us to judge which is best, even if the differences between two are slight.

We check each notebook's chassis for rigidity, as notebooks that don't flex under pressure are more likely to survive if you accidentally drop them. We also check each one for hot spots on the base when the notebook is idle and after it has finished our benchmark tests. If we notice any

uncomfortably hot areas, we'll warn you in our review. We also check each notebook for noise. We listen to each one when it's sitting idle as well as when it's running a demanding benchmark, and our reviews will warn you of any particularly loud fan noise.

Different people have different opinions on what makes a keyboard comfortable. We have a standard list of qualities to check, which includes the depth of key travel and the feedback provided when you push a button. Each keyboard and touch pad is tested by at least three of our writers, who confer to reach the conclusion you read in our notebook reviews.

Labs verdict Notebooks

Each of the three categories in this month's labs was fiercely contested, but in the end a couple of clear winners emerged.

Hi-Grade's Ultinote A9800R stood out in our budget category, thanks to its high-resolution 17in screen and a battery life of nearly four hours, which puts many of the ultra-portables in our group to shame. PC Nextday's Zoostorm 4-5628 costs £70 more than the Ultinote but is much faster in both Windows and games. Its battery didn't last as long but it still gave a respectable two hours and 40 minutes. It wins our Best Buy award.

The mid-range category was dominated by Eclipse's Titan i77vsta and PC Nextday's Zoostorm 4-5714, which are almost identical

in specification and appearance. Both were particularly quick in Windows. The Zoostorm has a roomy 250GB hard disk compared with the Titan's 160GB. But the Titan lasted almost half an hour longer in our battery test and costs £66 less so it wins our Best Buy award.

MSI's PR210 ultra-portable isn't very fast in Windows but it lasted just over four-and-a-half hours in our battery test. This is especially impressive given the PR210's low price of just £701 so it wins our Budget Buy award.

If you need a slender ultra-portable with long battery life that can also handle tough computing tasks, go for Dell's XPS M1330. Although more expensive than the other ultra-portables, its battery life was second only to



the PR210 but it's much faster in Windows and has a responsive and comfortable keyboard. It wins our Best Buy award.

NOTEBOOK PRICE TEST 2008

BUDGET NOTEBOOKS		★ BEST BUY		MID-RANGE NOTEBOOKS		★ BEST BUY	
MANUFACTURER	HI-GRADE	PC NEXTDAY	SAMSUNG	ACER	ECLIPSE		
Model	Ultinote A9800R	Zoostorm 4-5628	R60	TravelMate 7720	Titan i77vsta		
Rating	★★★	★★★★★	★★★★	★★★★	★★★★★		
Processor	Intel Core Duo T2080	Intel Core 2 Duo T7250	Intel Core Duo T7450	Intel Core 2 Duo T7300	Intel Core 2 Duo T7700		
Speed	1.73GHz	2.0GHz	2.0GHz	2.0GHz	2.4GHz		
Memory installed	1GB	1GB	1GB	2GB	2GB		
Memory slots (free)	2 (1)	2 (1)	2 (0)	2 (1)	2 (0)		
Max memory	4GB	4GB	4GB	4GB	4GB		
BIOS	AMI	Phoenix	Phoenix	Phoenix	Phoenix		
Dimensions (HxWxD)	33x393x280mm	37x360x255mm	33x358x261mm	37x400x289mm	37x393x275mm		
Weight	3.8kg	2.9kg	2.7kg	3.5kg	3.1kg		
Sound	Realtek HD Audio	Realtek HD Audio	Realtek HD Audio	Realtek HD Audio	Realtek HD Audio		
Pointing device	Touch pad	Touch pad	Touch pad	Touch pad	Touch pad		
DISPLAY							
Screen size	17in widescreen LCD	15.4in widescreen LCD	15.4in widescreen LCD	17in widescreen LCD	17in widescreen LCD		
Graphics adaptor	Intel GMA950	Nvidia GeForce 8600M GS	ATI Radeon Xpress 1250	ATI Mobility Radeon HD2400 XT	Nvidia GeForce 8600M GS		
Graphics outputs	D-sub, S-video	DVI	D-sub	D-sub, DVI, S-video	HDMI, DVI		
Graphics memory	256MB shared	256MB dedicated	256MB dedicated	256MB dedicated	256MB dedicated		
Native resolution	1,440x900	1,280x800	1,280x800	1,440x900	1,440x900		
STORAGE							
Hard disk (available)	120GB (110GB)	120GB (111GB)	160GB (149GB)	160GB (129GB)	160GB (149GB)		
Optical drive	DVD+/-RW +/-DL	DVD+/-RW +/-DL	DVD+/-RW +/-DL	DVD+/-RW +/-DL	DVD+/-RW DL		
Optical drive speeds	TSST SN-S082H (8X DVD+R, 8X DVD-R, 8X DVD+RW, 6X DVD-RW, 6X DVD+R DL, 4X DVD-R DL, 5X DVD-RAM, 24X CD-R, 24X CD-RW, 8X DVD-ROM, 24X CD-ROM)	TSST SN-S082H (8X DVD+R, 8X DVD-R, 8X DVD+RW, 6X DVD-RW, 6X DVD+R DL, 4X DVD-R DL, 5X DVD-RAM, 24X CD-R, 24X CD-RW, 8X DVD-ROM, 24X CD-ROM)	SlimType DS8A1P (8X DVD+R, 8X DVD-R, 8X DVD+RW, 6X DVD-RW, 4X DVD+R DL, 4X DVD-R DL, 24X CD-R, 16X CD-RW, 8X DVD-ROM, 24X CD-ROM)	LG GSA-T20N (8X DVD+R, 8X DVD-R, 8X DVD+RW, 6X DVD-RW, 4X DVD+R DL, 4X DVD-R DL, 5X DVD-RAM, 24X CD-R, 24X CD-RW, 8X DVD-ROM, 24X CD-ROM)	TSST SN-S082H (8X DVD+R, 8X DVD-R, 8X DVD+RW, 6X DVD-RW, 6X DVD+R DL, 4X DVD-R DL, 5X DVD-RAM, 24X CD-R, 24X CD-RW, 8X DVD-ROM, 24X CD-ROM)		
PORTS AND EXPANSION							
USB2 ports	4	4	3	4	4		
FireWire	1	0	0	1	0		
Infrared port	No	No	No	Yes	No		
Bluetooth	No	No	No	Yes	Yes		
Networking	10/100/1,000, 802.11a/b/g	10/100, 802.11a/b/g	10/100, 802.11b/g	10/100/1,000, 802.11b/g	10/100, 802.11a/b/g/Draft-N		
PC Card slots	1x ExpressCard/54	1x ExpressCard/54	1x ExpressCard/54	1x ExpressCard/54, 1x CardBus	1x ExpressCard/54		
Modem	Yes	Yes	Yes	Yes	Yes		
Legacy ports	None	None	None	None	None		
Memory card reader	Secure Digital, MultiMedia Card, Memory Stick, xD	Secure Digital, MultiMedia Card, Memory Stick	Secure Digital, MultiMedia Card, Memory Stick, xD	Secure Digital, MultiMedia Card, Memory Stick Pro, xD	Secure Digital, MultiMedia Card, Memory Stick Pro		
Other ports	None	None	None	None	None		
MISCELLANEOUS							
Carrying case	Yes	No	No	No	No		
Direct CD control	No	No	No	No	No		
Operating system	Windows Vista Home Basic	Windows Vista Home Premium	Windows Vista Home Premium	Windows Vista Home Premium	Windows Vista Home Premium		
Operating system restore option	Restore disc	Restore disc	Restore partition	Restore partition	Restore disc		
Software included	Nero Essentials, OpenOffice, CyberLink PowerDVD	None	None	Acer Empowering Technology, Acer GridVista, Acer Launch Manager, Acer Video Conference Manager, CyberLink PowerDVD, NTI CD-Maker	None		
Other standard accessories	None	None	None	Webcam	1.3-megapixel webcam		
Optional extras (inc VAT)	None	None	None	None	None		
BUYING INFORMATION							
Company founded	1986	1993	1971	Notebook Division 1985	1993		
Employees	70	75	Not disclosed	Not disclosed	Not disclosed		
Tech support staff	8	24	Not disclosed	Not disclosed	7		
Tech support times	9am-5.30pm Mon-Fri	9am-6pm Mon-Fri	9am-5pm Mon-Fri	9am-6pm Mon-Fri	9.30am-5.30pm Mon-Fri		
Parts and labour warranty	One year collect and return	One year RTB	One year collect and return	One year collect and return	One year RTB		
Price inc VAT	£499 inc VAT	£569 inc VAT	£494 inc VAT	£730 inc VAT	£800 inc VAT		
Price ex VAT	£425	£484	£420	£621	£680		
Details	www.higrade.com	www.pcnextday.co.uk	www.samsung.com/uk	www.acer.co.uk	www.eclipse-computers.com		
Supplier	www.higrade.com	www.pcnextday.co.uk	www.pcw.com	www.laptopsdirect.co.uk	www.eclipse-computers.com		
Part number	Ultinote A9800R	3384-5628	NP-R60F002/SUK	LX.TMROX.072	Titan i77vsta		



LENOVO	PC NEXTDAY	SAMSUNG	TOSHIBA	DELL
3000 N200	Zoostorm 4-5714 Advanced Ultimate Laptop	R70	Tecra A9-51S	XPS M1330
★★★★	★★★★	★★★★	★★★	★★★★★
Intel Core 2 Duo T7300	Intel Core 2 Duo T7700	Intel Core 2 Duo T7100	Intel Core 2 Duo T7100	Intel Core 2 Duo T7300
2.0GHz	2.4GHz	1.8GHz	1.8GHz	2.0GHz
1GB	2GB	1GB	1GB	2GB
2 (1)	2 (0)	1 (1)	2 (0)	2 (0)
4GB	4GB	4GB	4GB	4GB
Lenovo	Phoenix	Phoenix	Toshiba	Dell
39x359x265mm	37x393x275mm	32x355x270mm	30x366x268mm	45x320x239mm
2.8kg	3.1kg	2.6kg	2.9kg	2.0kg
Realtek HD Audio	Realtek HD Audio	Realtek HD Audio	Realtek HD Audio	SigmaTel HD Audio
Touch pad	Touch pad	Touch pad	Touch pad and touch stick	Touch pad
15.4in widescreen LCD	17in widescreen LCD	15.4in widescreen LCD	15.4in widescreen LCD	13.3in widescreen LCD
Nvidia GeForce Go 7300	Nvidia GeForce 8600M GS	Nvidia GeForce 8400M GS	Intel GMA3100	Nvidia GeForce 8400M GS
D-sub, S-video	HDMI, DVI	D-sub, HDMI	D-sub	D-sub, HDMI
256MB dedicated	256MB dedicated	128MB dedicated	384MB shared	128MB dedicated
1,680x1,050	1,440x900	1,280x800	1,280x800	1,280x800
120GB (104GB)	250GB (232GB)	120GB (102GB)	80GB (75GB)	160GB (146GB)
DVD+/-RW +/-DL	DVD+/-RW DL	DVD+/-RW +/-DL	DVD+/-RW +/-DL	DVD+/-RW +/-DL
LG GMA-4082N (8X DVD+R, 8X DVD-R, 4X DVD+RW, 4X DVD-RW, 24X CD-R, 16X CD-RW, 8X DVD-ROM, 24X CD-ROM)	TSST SN-S082H (8X DVD+R, 8X DVD-R, 8X DVD+RW, 6X DVD-RW, 6X DVD+R DL, 4X DVD-R DL, 5X DVD-RAM, 24X CD-R, 24X CD-RW, 8X DVD-ROM, 24X CD-ROM)	TSST TS-L632D (8X DVD+R, 8X DVD-R, 8X DVD+RW, 6X DVD-RW, 6X DVD+R DL, 6X DVD-R DL, 24X CD-R, 24X CD-RW, 8X DVD-ROM, 24X CD-ROM)	Teac DV-W28ECT (8X DVD+R, 8X DVD-R, 8X DVD+RW, 6X DVD-RW, 4X DVD+R DL, 4X DVD-R DL, 4X DVD-ROM, 5X DVD-RAM, 4X CD-R, 16X CD-RW, 16X DVD-ROM, 24X CD-ROM)	Matshita UJ-852S (8X DVD+R, 8X DVD-R, 8X DVD+RW, 4X DVD-RW, 4X DVD+R DL, 4X DVD-R DL, 24X CD-R, 16X CD-RW, 8X DVD-ROM, 24X CD-ROM)
4	4	3	3	2
1	0	0	0	1
No	No	No	No	No
Yes		Yes	Yes	Yes
10/100/1,000, 802.11a/b/g/Draft-N	10/100, 802.11a/b/g/Draft-N	10/100, 802.11a/b/g/Draft-N	10/100/1,000, 802.11a/b/g/Draft-N	10/100/Draft-N, HSDPA
1x ExpressCard/54	1x ExpressCard/54	1x ExpressCard/54	1x CardBus	1x ExpressCard/54
Yes	Yes	Yes	Yes	No
None	None	None	Serial	None
Secure Digital, MultiMedia Card, Memory Stick Pro, xD	Secure Digital, MultiMedia Card, Memory Stick Pro, xD	Secure Digital, MultiMedia Card, Memory Stick Pro, xD	Secure Digital, MultiMedia Card, Memory Stick, xD	Secure Digital, MultiMedia Card, Memory Stick Pro
None	Optical S/PDIF	None	None	None
No	No	No	Yes	No
No	No	No	No	No
Windows Vista Business	Windows Vista Ultimate	Windows Vista Home Premium	Windows XP Professional	Windows Vista Home Premium
Windows disc	Restore disc	Restore partition	Restore disc	Restore partition, restore disc
Adobe Acrobat Reader, Corel Small Business Center, Diskeeper 9.0 Home Edition, Lotus Notes	None	None	Toshiba Management Console, Connectivity Doctor, Toshiba Value Added Package	Microsoft Works 8.0
None	None	None	None	Integrated 0.3-megapixel webcam, remote control, Bluetooth headphones, wired earphones
None	None	None	None	Nine-cell battery £114
1984	1993	1971	1985	1984
19,000	75	Not disclosed	Not disclosed	Not disclosed
42	24	Not disclosed	Not disclosed	Not disclosed
9am-5.30pm Mon-Fri	9am-6pm Mon-Fri	9am-5pm Mon-Fri	8am-6pm Mon-Fri	8am-8pm Mon-Fri
One year customer carry-in	One year RTB	One year collect and return	One year collect and return	One year onsite
£718 inc VAT	£866 inc VAT	£730 inc VAT	£652 inc VAT	£1,279 inc VAT
£611	£737	£621	£555	£1,089
www.lenovo.co.uk	www.pcnextday.co.uk	www.samsung.com/uk	http://uk.computers.toshiba-europe.com	www.dell.co.uk
www.lambdtek.com	www.pcnextday.co.uk	www.laptopsdirect.co.uk	www.pcwb.com	Dell 0870 353 3277
TY2B2UK	3384-5714	NP-R70T001/SUK	PT552E-01D00YEN	NPUK5-N11X3306

ULTRA-PORTABLES



MANUFACTURER	FUJITSU SIEMENS	LENOVO	MSI	ROCK	SAMSUNG
Model	Esprimo Mobile U9200	3000 V200 076432G	PR210	Pegasus P335-T74	Q70
Rating	★★	★★	★★★★	★★	★★★★
Processor	Intel Core 2 Duo T7500	Intel Core 2 Duo T7300	AMD Turion 64 X2 TL-56	Intel Core 2 Duo T7400	Intel Core 2 Duo T7300
Speed	2.2GHz	2.0GHz	1.8GHz	2.16GHz	2.0GHz
Memory installed	2GB	1GB	1GB	1GB	2GB
Memory slots (free)	2 (0)	2 (0)	2 (1)	2 (0)	2 (0)
Max memory	4GB	4GB	2GB	2GB	4GB
BIOS	Fujitsu Siemens	Lenovo	AMI	AMI	Phoenix
Dimensions (HxWxD)	37x301x224mm	35x300x227mm	43x340x250mm	35x318x223mm	45x310x242mm
Weight	2.0kg	1.8kg	2.0kg	2.1kg	2.0kg
Sound	Realtek HD Audio	Conexant HD	Realtek HD Audio	Realtek HD Audio	Realtek HD Audio
Pointing device	Touch pad	Touch pad	Touch pad	Touch pad	Touch pad
DISPLAY					
Screen size	12.1in widescreen LCD	12.1in widescreen LCD	12.1in widescreen LCD	13.3in widescreen LCD	13.3in widescreen LCD
Graphics adaptor	Intel Graphics Media Accelerator X3100	Intel Graphics Media Accelerator X3100	ATI Radeon Xpress 1270	Intel Graphics Media Accelerator 950	Nvidia GeForce 8400M G
Graphics outputs	D-sub, S-video	D-sub	D-sub, HDMI	D-sub, S-video	D-sub
Graphics memory	358MB shared	128MB shared	256MB shared	256MB shared	128MB dedicated
Native resolution	1,280x800	1,280x800	1,280x800	1,280x800	1,280x800
STORAGE					
Hard disk (available)	120GB (109GB)	120GB (105GB)	160GB (143GB)	160GB (149GB)	160GB (139GB)
Optical drive	DVD+/-RW +/-DL	DVD+/-RW +/-DL	DVD+/-RW +/-DL	DVD+/-RW +/-DL	DVD+/-RW +/-DL
Optical drive speeds	LG GSA-T20N (8X DVD+R, 8X DVD-R, 8X DVD+RW, 6X DVD-RW, 4X DVD+R DL, 4X DVD-R DL, 5X DVD-RAM, 24X CD-R, 24X CD-RW, 8X DVD-ROM, 24X CD-ROM)	Matshita UJ-850 (8X DVD+R, 8X DVD-R, 8X DVD+RW, 6X DVD-RW, 4X DVD+R DL, 4X DVD-R DL, 5X DVD-RAM, 24X CD-R, 16X CD-RW, 8X DVD-ROM, 24X CD-ROM)	LG GSA-T20N (8X DVD+R, 8X DVD-R, 8X DVD+RW, 6X DVD-RW, 4X DVD+R DL, 4X DVD-R DL, 5X DVD-RAM, 24X CD-R, 24X CD-RW, 8X DVD-ROM, 24X CD-ROM)	Sony DW-Q520A (8X DVD+R, 8X DVD-R, 8X DVD+RW, 4X DVD-RW, 4X DVD+R DL, 4X DVD-R DL, 24X CD-R, 24X CD-RW, 8X DVD-ROM, 24X CD-ROM)	TSST TS-L632D (8X DVD+R, 8X DVD-R, 8X DVD+RW, 6X DVD-RW, 6X DVD+R DL, 6X DVD-R DL, 24X CD-R, 24X CD-RW, 8X DVD-ROM, 24X CD-ROM)
PORTS AND EXPANSION					
USB2 ports	3	3	3	2	2
FireWire	0	1	0	1	1
Infrared port	No	No	No	No	No
Bluetooth	No	No	Yes	No	No
Networking	10/100/1,000, 802.11a/b/ g/Draft-N	10/100, 802.11a/b/g/ Draft-N	10/100/1,000, 802.11b/g	10/100/1,000, 802.11a/b/g	10/100/1,000, 802.11a/b/g
PC card slots	1x ExpressCard/34	1x ExpressCard/54	1x ExpressCard/54	1x CardBus	1x CardBus
Modem	Yes	Yes	Yes	Yes	Yes
Legacy ports	None	None	None	None	None
Memory card reader	Secure Digital, MultiMedia Card, Memory Stick Pro	Secure Digital, MultiMedia Card, Memory Stick Pro, xD	Secure Digital, MultiMedia Card, Memory Stick Pro	Secure Digital, MultiMedia Card, Memory Stick Pro	Secure Digital, MultiMedia Card, Memory Stick Pro, xD
Other ports	None	None	None	None	Optical S/PDIF output
MISCELLANEOUS					
Carrying case	No	No	Yes	Yes	No
Direct CD control	No	No	No	No	No
Operating system	Windows Vista Business	Windows Vista Business	Windows Vista Home Premium	Windows Vista Home Premium	Windows Vista Home Premium
Operating system restore option	Restore disc	Restore partition	Restore partition, restore disc	Restore disc	Restore partition, restore disc
Software included	Ahead Nero Essentials 7.5.9.1, Microsoft Windows XP Professional, Symantec Norton Internet Security 2007	Diskeeper 9.0 Home Edition, Google Picasa 2, PC Doctor 5, Symantec Norton Internet Security 2007	CyberLink Power2Go 5, CyberLink PowerProducer 3, CyberLink PowerDVD 7, Microsoft Works 8.5	BullGuard Antivirus 9, Roxio Easy Media Creator 9 LE	None
Other standard accessories	Integrated 1.3-megapixel webcam	Integrated webcam	Integrated 1.3-megapixel webcam, integrated fingerprint reader, USB mouse	None	None
Optional extras (inc VAT)	None	None	None	None	None
BUYING INFORMATION					
Company founded	1999	1984	1986	1992	1971
Employees	Not disclosed	Not disclosed	25 UK-based	Not disclosed	Not disclosed
Tech support staff	34	Not disclosed	5 UK-based	6	Not disclosed
Tech support times	9am-5.30pm Mon-Fri	Unknown	9am-5pm Mon-Fri	9am-5pm Mon-Fri, 10am- 2pm Sat	9am-5pm Mon-Fri
Parts and labour warranty	One year collect and return	One year RTB	First year collect and return, second year RTB	Three years collect and return	One year collect and return
Price inc VAT	£1,053 inc VAT	£829 inc VAT	£701 inc VAT	£1,023 inc VAT	£817 inc VAT
Price ex VAT	£896	£705	£597	£871	£695
Details	www.fujitsu-siemens.co.uk	www.lenovo.co.uk	www.msicomputer.co.uk	www.rockdirect.com	www.samsung.co.uk
Supplier	www.fujitsu-siemens-shop. co.uk	www.morecomputers.co.uk	www.ebuyer.com	www.rockdirect.com	www.laptopsdirect.co.uk
Part number	LKN:GBR-230100-0012	TF132UK	PR210-016UK	P335-T74	NP-Q70AV02/SUK